Attachment 2 called SBC Broadband Service CLEC Overview 1.0. I want to read you a note at the bottom of the first page and see if I have read this correctly. I am quoting here from this page. "The Broadband Wholesale Service, including rates, terms, and conditions is subject to change, modification, or withdrawal by the SBC ILECs in their sole discretion

in whole or in part either before or after the service becomes operational as a result of the matters now pending before the FCC." Do you see that sentence there in the footnote?

A. Can I re-read it real quick just to make sure I caught everything?

Q. Sure.

A. Yes, I do see that. The second sentence where it points out "As a result of the matters now pending before the FCC," my understanding of the

intent of that -- I did not write that note but I was aware that that note was there, and my understanding of the intent of that note was that, had the FCC decided that the SBC ILECs were not allowed to own the line cards in the remote terminals and the OCD in the central offices, that this service would not be able to be offered the way it was described in here. And so, therefore, would either be withdrawn or have to be re-described and, you know, completely redone in that sense.

Q. That doesn't say that there, does it, what you say you think the intent was on that page,

was it?

A. I don't see those words there but the last few words do say, "As a result of matters pending before the FCC." So that's what I would interpret those words to mean.

Q. All right. So now the nomenclature has changed and you pulled out any references to the words "line sharing;" is that what you are saying?

A. That's not at all what I am saying. What we have done, Mr. Bowen, is we have renamed it to "Data with Line-shared Sub-loop Arrangement" which clearly specifies that the line sharing occurs on the copper sub-loop.

Q. All right. Let's turn now to page 7 of your direct. And let's talk about the overlay network concept. You were here this morning when we talked about this with Mr. Smallwood. It's your testimony as well or your assertion that Pronto is an overlay network; is that correct?

A. Yes, it is.

Q. What you mean mean by that, I take it, is not a complete overlay, meaning you aren't going to

build new facilities all the way from the premises; you are going to use existing distribution gear; is that right?

A. When the broadband service is ordered by a CLEC, yes, an existing distribution pair would be used as part of the service.

Q. In other words, you are going to deploy new fiber optics and new or upgraded remote terminal locations, and new feeder cable between the RTs and the serving area interfaces or feeder distribution interface points, right?

A. Yes, sir and the OCD.

Q. And the OCD in the central office?

A. Yes, sir.

Q. But you are not going to build any distribution pairs?

A. No, sir, that's correct.

Q. At least not just because of Pronto?

A. No, and I assumed your question meant that context, yes, sir.

Q. So, in other words, it's an overlay network by your assertion out to the SAI?

A. Yes, sir. And, in fact, I have JPL-1 as an attachment to our rebuttal shows the very thing that you are describing.

Q. I saw it. Now, you are also testifying that you are not going to take out of service the existing copper feeder that right now comes out of the SAI and goes to the central office; is that right?

A. Yes, sir, not as a result of Project Pronto we are not going to do that.

Q. All right. So in effect -- and just so we are clear, the Project Pronto plan contemplates that RTs and SAIs can be physically separated from each other by some distance; in other words they aren't always right next to each other, right?

A. That's correct.

Q. And whether they are close or far away, in between the RT and the SAI is copper feeder, right?

A. Yes, sir.

Q. In other words, it isn't fiber all the way out to the SAI?

A. That's correct.

Q. So you are going to be putting new copper

feeder plant in between the RT and the SAI the RT serves; is that right?

A. Where it is required. In some instances it might be an existing CEV or hut, where we are deploying the Project Pronto equipment. And if there is already copper -- which there already would be copper from that point out to the SAIs. If there are spare pair counts in those copper cables, those could be used for some of that that you are talking about. But to the extent that we would need new, we would put in new.

Q. I think it is the case, as we termed it before, that you are deploying cabinets as the

majority technology to house these new DLCs, right? Something like 60/80 percent of DLCs will be in cabinets?

A. Yes, sir.

Q. And so those will be new placements, right?

A. Yes, sir, those would be.

Q. You have to build new copper feeder from those new placements out to the existing SAIs, right?

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A. Unless they are upgraded cabinets.

Q. But if they are new, you have got to build new feeders from them to the SAIs?

A. That's true.

Q. All right. Now, so you are going to have two, in effect, double the feeder cables or at least some multiple over 1.0 of feeder cables coming into the SAI now, the old feeder cable and the new feeder

cable, right?

A. Yes, sir.

Q. Does the Pronto architecture require any expansion or upgrades of the SAIs to handle that additional feeder cable capacity?

A. I am actually not familiar with what work has to be done at the SAIs. I have not gotten into that aspect of the project.

Q. I thought you were the Pronto guy?

A. We have some handoffs, you might say, in areas of responsibilities. I honestly have not gotten into what construction is required at individual SAIs as far as whether they have to be modified in any way for the termination of these pairs.

Q. Okay. Who is the witness to ask those kinds of questions?

A. That would probably be Ms. Schlackman.

Q. Okay. But again, knowing what you know about outside plants and engineering, isn't it possible or indeed likely that if you are going to add a second feeder cable in coming into the SAIs, that you are going to need at least for some SAIs to increase the capacity of the SAI to handle those feeder terminations?

A. Yes, sir, unless you change the size of your distribution areas and end up actually placing new SAIs to..

Q. Absent that?

A. ...Split the load.

Q. Absent subdividing distribution areas, you are going to need to, in some cases, you are going to need to increase the capacity of the SAI, right?

A. Well, and not even necessarily all of them would that be required because in some cases some of the feeder may not even be activated yet. You may not be using every feeder pair on the feeder side of

the SAI.

Q. I am not saying in every case. I am saying, based on what you know about outside plant engineering -- again, you are back to engineering days, not your regulatory days -- isn't it a reasonable conclusion to draw that you will need to augment at least some SAIs?

A. I do not know, because in those instances where augmentation of that cabinet might be required, they might have placed an additional SAI and broken up the service area. I really don't know.

Q. Okay. We will ask Ms. Schlackman.

Let's turn now to page 8 of your direct testimony. For the context of the transcript here you are talking about, because of your assertion that Pronto is an overlay network, Rhythms can still use available all copper loops for DSL service; is that right?

A. Yes, sir, that's correct.

Q. Now, you are familiar with the term

"crosstalk;" are you not?

A. Yes, sir, I am.

Q. Is that, at least in some circumstances, a concern when you get DSL signals running next to each other on copper facilities?

A. It's something that should be taken into consideration, yes, sir.

Q. Now, there are standards by which they have been looked at, the different DSL types, and have specified things like power spectral density masks and all those kinds of things so that that crosstalk can be understood and managed; is that fair?

A. Yes, sir, that's the intent of those masks.

Q. Now, isn't it correct that all those calculations and of all those masks assume that the DSL transceivers are located, one, on the customer's

premises or they are in the central office?

A. I suspect a lot or most of the models that model that assume that the transceivers are located in the same place. In other words, all of them at the CO or all of them at an RT or wherever.

Q. But they don't assume, do they, that you can have a situation where you are going to have some

transceivers in the central office and some transceivers in, say, an RT location?

A. Well, I think it's recognized that that can and will happen, where you have some in the CO and some at the RT. And I think, again, it's wise to take into consideration the crosstalk that can result from that.

Q. Okay. And isn't the signal strongest and, therefore, the crosstalk danger the greatest close to those transceivers?

A. Yes, sir, that's correct.

Q. And if you put a transceiver -- when you deploy Pronto and you deploy these ADLU cards, that has the DSLAM transceiver functionality on the card; isn't that right?

A. Most of the functionality is there on that card, yes, sir.

Q. So what would be in the central office is now out in the field some place, right?

A. You are referring to the Pronto ADLU cards?

Q. Yes.

A. Yes, sir, that's correct. But not only that, but if a CLEC chooses to remotely locate a stand-alone DSLAM in an RT, the same situation exists. Furthermore, if the CLEC actually is allowed to own the line card, which we think is not the right thing

to do, the CLEC's line cards out there in the Project Pronto remote terminal would be the same situation as well.

Q. Does that complete your answer, Mr. Lube?

A. I guess what I am trying to say, Mr. Bowen, is regardless of whether it's in the Pronto RT equipment or whether it's your client's remotely-located DSLAM in that same RT, that's a consideration for all of those situations.

Q. Fair enough. But what I want to talk about is your assertion that we don't have to use Pronto. We can still use that copper that's there right now and keep on providing our DSL services on what we call home run copper, that's copper from the premises to the central office. I want to talk about that assertion of yours, and I want you to keep in mind our discussion of crosstalk.

We are using the same distribution pairs

for both Pronto and home run copper; you have already said that, right?

A. And, potentially, a third arrangement whereby another CLEC might have a remotely located DSLAM in that same RT. Those are also using the same distribution pairs.

Q. I appreciate your addition. But isn't it correct that the Pronto architecture would use the same distribution pairs as will existing CLEC services on home run copper?

A. Not literally the same pairs, but pairs in the same cable.

Q. Pairs in the same binder group?

A. Yes, sir.

Q. And these are normally 25 pair binder groups in distribution cables, right?

A. Some of the distribution cables start out in the cabinet sometimes larger than 25 but they get down as small as 25.

Q. Okay. In other words, the distribution cables in general are smaller than feeder cables by

definition, right?

A. Yes, sir.

Q. And so the copper is closer to each other than it is in a feeder cable? That's a bad question. The separation between any two pairs in distribution cable is less than it is in a feeder cable, potentially; isn't it?

A. Yes, sir.

Q. Well, isn't -- let's say that we have -- that Rhythms has a customer at a location that is 19,000 feet from the central office, as the copper runs. It is unloaded and they are running SDSL; can you assume that with me?

A. Yes, I can.

Q. There actually are loops that are longer than 18,000 feet, aren't there, because of heavier cable gauges?

A. My understanding is that the 18,000 feet

is pretty much the standard loading or the distance where you begin to load.

Q. But if you use heavier cable gauge, you can get additional reach out without a heavier load,

right?

A. Theoretically, you can.

Q. Well, let's assume that you have a Rhythms customer 19,000 feet out using SDSL and you deploy Project Pronto, and you provide all that Rhythms customer's neighbors with ADSL service. Do you think there is any probability that that SDSL signal would be impaired by that central office strength transceiver sitting up there with the RT?

A. Not any more than would be caused by, let's say, Sprint's remotely located DSLAM located in that same RT.

Q. But either -- whether it's a Sprint DSLAM or ADLU card of Ameritech, they both could step on

that SDSL signal; is that right?

A. I don't know that they would, but that has to be considered.

Q. They could; couldn't they?

A. Well, I suppose that it's possible, but I can't say that it would.

Q. Well, let me put it this way. Is Ameritech willing to guarantee the current performance

levels over all copper loops as it deploys Pronto? Is it willing to guarantee current throughput on deployed loops by CLECs as it deploys Pronto?

A. I'm not sure that we have any such guarantee that we have made.

Q. You haven't but the architecture is not yet deployed. Your assertion is, Pronto won't hurt any -- won't impair in any way CLECs' use of home copper loops; isn't that what you are saying?

A. Well, not exactly. What we really said was, if there are CLECs who still choose to use home run copper, if they want to use that, that copper will still be in the ground, still be available for them to use.

Q. But you aren't willing to guarantee their current throughput across those home run copper loops, I take it?

A. I can't make that guarantee for my company, no, sir.

Q. So there could be degradation in throughput because of the Pronto deployed architecture; is that right?

A. Well, technically there could be. But, again, if a different CLEC put a DSLAM in that same RT, you could have the very same potential. It's not

just a Project Pronto issue that we are talking about here. It transcends Project Pronto.

Q. And you have read the investor briefing; have you not?

A. A long time ago.

Q. Do you recall the number of DSL lines that SBC projected would be deployed by SBC or its affiliates on that architecture?

A. What I recall reading was how many lines would be able to obtain DSL service within SBC's footprint. I don't recall that that exactly said that SBC would be the retailer of all those.

Q. Okay. Well, do you recall a total take rate by all parties of the Pronto architecture for DSL service?

A. Well, I do recall some numbers that were used that applied to all DSL-capable loops, including central office fed and Pronto RT fed. I believe it was like 77 million.

Q. You don't recall just the Pronto?

A. I think it was about 20 million, if I recall correctly.

Q. Let's talk about you mentioned a couple times somebody else placing a DSLAM out in the RT, somebody else meaning not -- meaning a CLEC like Rhythms or Sprint or somebody else. That's a possibility under your proposal, right, if there is room?

A. Well, it's not just under my proposal, but this is a possibility that has even been raised by the CLECs to the FCC. So, yes, I am saying that that could happen.

Q. So if I understand correctly, if there is space out there, either adjacent to the RT or in the RT, SBC would allow Rhythms to collocate a DSLAM at the RT or, as I said, next to it, right?

A. Yes, that's the intent.

Q. And then Rhythms could pick up the copper going back from there to the customer premises, right?

21 A. Through an engineering control splice,
22 they could obtain feeder to get to the SAI, and you

1 are right, to then get to the customer's premises.
2 Q. And this engineering control splice, I
3 want to take you back to the earlier days, meaning six
4 months ago, ancient history in telecom. At one point
5 SBC was saying, well, you can't get access to the
6 copper at the RT because it's integrated into the back
7 of the DLC and I can't give you any cross connects.
8 Do you remember that?
9 A. Well, that's still true for the pairs
10 that terminate on the remote terminal equipment. But,
11 yes, I do remember that.
12 Q. So you had a 600 pair cable coming in.
13 And before, you were just going to take all those
14 pairs and hook them to the back of the plug-ins,
15 right, so you couldn't split them away from there?

A. All the pairs that were hooked up, in fact all the pairs that went into the RT, couldn't be accessed through a cross connect device. They were either tied to the back of the equipment or they were just dead, you know, cut dead so to speak, in the remote terminal.

Q. Okay. Fair enough. But now you have

this thing called the engineering control splice which takes at least some of those spare pairs and shunts them away to a cross connect location, right?

A. Yes. When you had said some of those pairs, obviously, those are some of the pairs -- or those are pairs that are not connected to the RT.

Q. Right.

A. Right.

Q. In other words, here comes 600 pairs in in a big fat cable. Five hundred go to the back of

the DLC; a hundred got to the engineering control splice to a cross connect facility.

A. That would be the intent if a CLEC wants access to it.

Q. Okay. So if I want to put a DSLAM out there, I would then cross connect to that engineering control splice at a cross connect panel, right?

A. Yes, sir. You would run your cable from the low speed side of your equipment out to that ECS or engineering control splice, and that's where you would be cross connected.

Q. And then I get access to the feeder pair

that goes from there to the SAI distribution area and then it goes to the customer's premises, right?

A. Yes, sir.

Q. Great. Now I have got myself hooked up to my customer, I have got the signal DLSAMed, right? Now what do I do with it? I can probably give it back

to you to carry on the fiber, right, on the lid fiber?

A. Not on the lid fiber.

Q. I can't?

A. Well, there is no place for that equipment to accommodate the high speed side of your DSLAM shelf.

Q. What do I need for that then? If I wanted to give you back like a DS-3 level signal, what do I need to add beyond just the DSLAM?

A. You would need to get unbundled dark fiber.

Q. No, no, no, I don't want to use dark. I want to give you something that you can use to go back on your lid fiber.

A. If you are talking about the lid fiber that is used for Project Pronto, there are no ports or

inputs that you can have access to in the clear majority of the Project Pronto RT sites. There will be a signal number of Project Pronto RT sites that are Alcatel that are called the 2012. And the 2012 has a couple additional, or two additional, OC-3 outputs that are used for other services. If those are available and you wanted to hand a DS-3 to Ameritech, you would need a multiplexer that would bump your DS-3 up to an OC-3 level potentially for utilizing the OC-3 or one of the spare OC-3 bandwidths in the 2012.

Q. Okay. But can I install the DSLAM, buy an add/drop multiplexer, and then hand you a signal on the Alcatel 2000, not the 2012?

A. On the 2000?

Q. Yeah.

A. No, sir.

Q. Why not?

A. The equipment is not configured for other carriers' high speed lines to be connected into it.

Q. Okay. So what you are saying is the Alcatel equipment -- there is no way that I could put

22 enough equipment in there to be able to hand you back

1 on the Alcatel 2000, to hand you back a signal that
2 you could accept so that I could ride your lid fiber,
3 either the TDM side or the ATM side, right?
4 A. That's right, but dark fiber would be
5 available at that RT site in most instances.
6 Q. So my only option then, if I spent the
7 money to go out there and put the DSLAM in, is to use
8 either my own way to get home or your dark fiber,
9 right?
10 A. Or a third party's spot. When you say on
11 your way home, it could have been fiber you lay or it
12 could be another carrier's fiber that may be running
13 nearby.
14 Q. If I wanted to use somebody's fiber, say
15 your dark fiber, if I want to use dark fiber, I have
16 got to light it up somehow, right? I can't just take
17 my DSLAM, hook it to a fiber and say I am done, right?

A. If your DSLAM has an optical output, you would not need another piece of equipment. If it only has, for example, a DS-3 output on the high speed side, you would need a multiplexer with an optical card or optical electronics that would be able to

interface that dark fiber.

Q. If I wanted to run it on SONET, S-O-N-E-T, all caps?

A. That would be the multiplexer I was just talking about. That would not be an additional piece.

Q. That's additional amount of money beyond the DSLAM if it's a separate piece of equipment, right?

A. You mean for the CLEC?

Q. It's not free?

A. No, no, sir. Well, if it were, we would get a whole lot of them for ourselves.

Q. All right. So I am at the RT, I have managed to find some space for collo somehow, and I got my DSLAM out there, I have got my multiplexer and SONET equipment out there, and now I want to say, okay, I will use your dark fiber. Do you have any?

A. We believe that there will be dark fiber available at most locations. If there is not, there is not. But we believe that there will be dark fiber because of -- and we are talking Project Pronto remote terminal sites.

Q. Right.

A. I guess the commitment we can make to you is, if it's there and spare, you can have access and use it, access to it and use it as unbundled dark fiber.

Q. Okay. I appreciate that, but I want to know if it's going to be there or not. You must have

done some analysis; I mean, you wouldn't just make an offer in your testimony with the sleeves off your vest, would you?

A. I guess what I am saying is, even before the SBC ever announced Project Pronto last fall, the alternative for Rhythms to collocate a DSLAM and find its way back to its ATM cloud with fiber or whatever has always been there as an opportunity or as an option for CLECs to provide DSL services. Project Pronto does not affect that except to the extent that it makes it easier for you to do that, not only through the voluntary commitments that bring up the engineering control splice, and the termination of unterminated dark fiber, but also the fact that there is probably in most instances more fiber out there

because of the deployment of Project Pronto.

Q. Okay. So how much -- you must have done some analysis -- let me put the question to you again.

I am taking you as an honest witness who wouldn't offer something that you didn't think was a real option, would you?

A. You are right. I believe it is a real option in some locations.

Q. So tell me -- so you must have done some analysis to say, okay, on an average I think there will be two strands or four strands or six strands available. Have you done that kind of analysis?

A. No, sir. Here is how my analysis went. If there were no Project Pronto, there has always been an opportunity for the CLEC to remotely locate DSLAM equipment and get it back to its ATM cloud in the way that it best saw fit to do so. Now, now that there has been the advent of Project Pronto, that pre-existing option is even more available or more easily obtainable by a CLEC. That's my analysis. It's a common sense type of analysis.

Q. Okay. But you can't give the Commission

or Rhythms any assurances that what you are putting out here as a real option for Rhythms as use of dark fiber actually will be available in Illinois?

A. No. I can't do that for any particular RT site in the state of Illinois.

Q. Okay. Now, what you have submitted to the FCC indicates that on average there will be, for the offices you are deploying it in, about 20 RTs for the central office; is that right? Sixteen to 24?

A. That's a pretty good average.

Q. And for each of those RTs there are three to five SAIs, right?

A. Somewhere in that neighbor, right.

Q. So let's just use 20 as a numeric average of 16 and 24; is that fair?

A. Sure.

Q. And four SAIs, is that fair, average of three and five?

A. Yes, sir.

Q. Is it correct that there is a relationship between an SAI normally and what you call

22 a distribution area?

1 A. Yes.
2 Q. What is that? That is, is it one-to-one,
3 is there one SAI per DA, or is there more than one?
4 A. I think normally it's one SAI per
5 distribution area.
6 Q. Distribution areas, am I correct, are
7 geographic areas that contain between, say, 200 and
8 600 living units?
9 A. I forget the exact number. I'm sure
10 that's written somewhere.
11 Q. Does that sound roughly right to you?
12 A. It could be within the right range. I am
13 sure it's not 10,000. I'm sure it's not 50. So I
14 would say that's a reasonable start.
15 Q. How many DAs, distribution areas, will an

RT normally serve? Can we say, given that we said one-to-one SAI to distribution area, that it will only serve four?

A. RNLTH three to five and four on average perhaps, yes, sir, maybe six.

Q. And what's the -- isn't it correct that the line capacity of an Alcatel 2000 unit is 2,016

lines?

A. Yes, sir, I believe that's right.

Q. So you have got a maximum per RT with an Alcatel 2000 of, say, roughly 2000 lines served, isn't that right, for voice-grade service?

A. Yes.

Q. And you have -- let's say that Rhythms wants to go out and do this placement of the DSLAM at the RT. Now, if we got a -- what do you think a good penetration rate is for all DSL services? Do you

think 20 percent sounds about right?

A. I have no knowledge of what a good penetration rate is. I really do not know.

Q. Do you know what SBC expects the penetration rate to be?

A. I don't recall.

Q. Let's assume it's 20 percent, just hypothetically.

A. Hypothetically, okay.

Q. Let's say Rhythms gets -- you know, of the total Rhythms gets one or two percent and Covad gets its few percent and Northbrook gets its two

percent, and whoever else is out there gets its two percent and SBC's AADS gets some too, and they total 20 percent, okay? Can you assume that with me?

A. Yes.

Q. Now, what's one percent of two thousand lines?

A. Well, it's 20.

Q. Twenty. And what's two percent of two thousand lines?

A. That should be 40.

EXAMINER WOODS: He is an engineer.

MR. BOWEN: I didn't want to attempt lawyer math so I appreciate you doing that.

Q. So let's say Rhythms gets one or two percent in an RT location. Do you think it makes -- do you know something about outside planning economics, I take it, from being an engineer?

A. Something.

Q. Something about that. Does it make any sense at all for you to, for Rhythms, to invest what it would take to put a stand-alone DSLAM, a multiplexer, and lease dark fiber from you to be able

to serve 20 or 40 customers from an RT?

A. I have not done that calculation.

Q. What do you think?

A. I don't know. But to be real direct with that, I think a CLEC that is contemplating remotely locating a DSLAM has to do an analysis of its costs versus its expected take rate. And wherever that crossover occurs, if they believe -- crossover meaning revenues versus costs -- if they believe they can make money in their business plan by providing a remotely located DSLAM, then they should pursue that route. If not, there are alternatives such as the Broadband Service.

But I might point out there must have been some CLECs that really thought that was a viable option, at least in some specific RT locations or the CLECs would not have pressed the FCC and SBC, frankly, to commit to some actions on our part to make it easier or more possible for CLECs to collocate at RT sites. I don't believe the CLECs would have done that for nothing.

Q. Okay. I want you to assume now,

Mr. Lube, that you for whatever reason have decided to leave the employ of SBC and go work for a data CLEC. And you are being hired because you have been a real engineer, you are a good engineer, and they are hiring you for your engineering expertise in outside plant. Can you assume that with me?

A. Yes, sir.

Q. The president of the company calls you in and says, Mr. Lube, I want you to tell me if you would advise that on a broad basis I go out there and deploy DSLAMs and multiplexing equipment and lease SBC's dark fiber to serve an average penetration rate of one or two percent. What would your advice be?

A. To not do that.

Q. Why?

A. Because that would not be economic for

you under those circumstances that you described. But there may be other places where you target your marketing more intensively, specific pockets of customers, specific subdivisions or business parks where you want to go in and put the biggest thing you can find or find space for in that RT and sell like

crazy.

Q. Okay. Now, you are still in the employ of this data CLEC. The president asks you then, okay, based on your experience and your knowledge and without doing any real study, what do you think the economic breakpoint might be in terms of take rates to be able to prove-in a stand-alone DSLAM multiplexer and lease of dark fiber to an RT?

A. Since I haven't performed that analysis, I truly can't say. If I were working for that

company, I would say I would need to go do that analysis.

Q. The president just wants your kind of seat of the pants gut feeling to know this, based upon your years of expertise.

MR. BINNIG: I will object to the relevance.

EXAMINER WOODS: I think it's asked and answered.

MR. BOWEN:

Q. Okay. Now you can be an SBC employee again. Do you feel relieved?

A. Actually, it was kind of fun being an

ex-SBC employee for a minute. You didn't tell me how many options you were going to offer me.

Q. We can talk.

EXAMINER WOODS: Is this a different line?

MR. BOWEN: Yes.

EXAMINER WOODS: I need to interrupt.

(Whereupon the hearing was in a short recess.)

EXAMINER WOODS: Back on the record.

MR. BOWEN:

Q. Okay. Mr. Lube, on page 11 of your direct testimony, lines 11 through 15, here you are talking about the fact that the Pronto architecture and the NGDLC equipment will contain DSLAM functionalities; do you see that?

A. Yes, I see a combination of those do, yes.

Q. I want to try to keep this simple. I know that the card talks to the NGDLC and vice versa. I don't want to dispute that with you. But isn't it correct that the DSLAM functionality resides on the card itself?

A. I guess it's our belief that a

considerable amount of the DSLAM functionality resides on the card, but the card by itself cannot act as a DSLAM. And I think it's kind of back to what you started out by saying. For the DSLAM functionality to be complete, it has to talk to the common control card that's in that channel bank.

Q. All right. Well, I take it it's the case that these Alcatel -- strike that. Are we talking in Ameritech Illinois only about Alcatel or is AFCUFC 1000 equipment deployed here as well?

A. It's not deployed here, but SBC is looking at the AFCUFC 1000 for very small RT applications.

Q. So we can just talk Alcatel and capture the lion's share of the DLCs for Pronto; is that fair?

A. Yes, sir.

Q. Am I correct that at least part of the functionality of the NGDLC is software?

A. Software provides part of the functionality, yes, sir.

Q. And that the Alcatel Litespan DLC

equipment has been through a number of software releases; is that right?

A. Yes, that's correct.

Q. And am I correct that the first software release that supports these ATM cells across the separate fiber is release 10.2; does that sound right?

A. That sounds right but I don't remember exactly which point release it was. I don't personally keep track of all the individual sub-releases and so on.

Q. But the major release number is ten, right?

A. I believe that is correct.

Q. So the early release numbers, although they were NGDLC, would not support the ATM functionality; is that right?

A. That was my understanding.

Q. Now, any of these Alcatel Litespan units,

I take it, that are deployed right now can support voice services, right?

A. The ones that are deployed in Illinois today?

Q. Yes.

A. Yes, they can support voice.

Q. And the new ones you are deploying, the new Litespans you are deploying, will also support just regular voice services; is that right?

A. That's correct.

Q. And I take it that, in terms of the way the DLC looks, you are talking here about a bunch of chasses, a bunch of rectangular boxes, that you plug cards into slots, right, at least as part of the functionality?

A. I don't think that's the functionality. It's part of the hardware. It helps provide the functionality.

Q. These ADLU cards are cards that plug into one of these slots in the chassis, right?

A. That's correct.

Q. And there is also just regular voice cards that plug into the same slots, right?

A. Of different channel bank assemblies. It's a separate channel bank assembly for POTS only, yes, sir.

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Q. But it's the same physical type of card, looks in terms of dimensions as if it plugs into the same type of slot, right?

A. Yes.

Q. Same for ISDN cards?

A. Yes, sir.

Q. And I take it that for a regular old POTS card, a voice-only card, that that too needs -- doesn't by itself function; it needs to talk to the

NGDLC software, too; is that right?

A. Yes, sir, the system software and the common equipment that's also used for POTS is all part of the POTS functionality.

Q. But a regular old POTS card can't perform a DSLAM function, right?

A. That's true.

Q. And it cannot perform a splitter function, right?

A. That's true.

Q. So I take it that, if I understand this correctly, that the difference between a regular POTS card and an ADLU card is the addition of the DSLAM

functionality and the splitter functionality?

A. Yes, sir, I would say part of the DSLAM functionality and the entire splitter is the only difference.

Q. That must mean that there is some part of the DSLAM functionality that is already resident somehow in the DLC then; is that right?

A. Well, yeah, there is some of the functionality that is built into the common equipment card that's in that DSL channel bank as well.

Q. When you say functionality in that sense, do you mean higher throughput capacity on the back plain or something different than that?

A. I guess all I am saying is the total signal processing required to take DSL signals off of a copper pairs and do what a DSLAM would do to those, resides on the combination of the circuitry on the ADLU card and circuitry that exists on the common control card for that shelf, and the software that drives all that.

Q. Do you know specifically what DSLAM functionality is not on the card that you are alleging

exists somehow in the common control assembly?

A. Part of the ATM multiplexing function, as I understand it, actually resides on the common control card.

Q. I thought we were talking just here about DSLAM functionality; not ATM multiplexing functionality. I know you have to multiplex it to get it out.

A. That's what the DSLAM does. Maybe we can make this very simple. But the DSLAM essentially takes the signal that comes in off the copper pair and packetizes that or puts it into ATM cell, in other words, does a signal conversion, so to speak, and then the DSLAM multiplexes many of these so-converted signals into a higher bandwidth signal. And so all I am saying, Mr. Bowen, is some of that aggregating of these signals occurs at the common control card.

Q. The multiplexing part of that?

A. The multiplexing part of the DSLAM. In other words, if you have a stand-alone DSLAM, that's

part of your stand-alone DSLAM, is that multiplexing function. That's all that we have been talking about.

Q. All right. Again, with your regulatory hat on, am I correct that you will agree that CLECs are not required to basically take one of the other -- well, the service offering in general, but they have a right to a menu of whatever UNEs or services are available to them?

MR. BINNIG: Well, I will object to the vagueness of the question.

MR. BOWEN:

Q. I will rephrase it. Throughout your testimony here, Mr. Lube, you are saying "You still keep getting what you are getting right now as CLECs and this is one more option," right?

A. I'm sorry?

Q. The Pronto wholesale Broadband Services

is one more option for you?

A. To provide DSL services?

Q. Yes.

A. Right.

Q. And I took that statement to mean, either implicitly or explicitly, to mean that we don't need to get Pronto as UNEs because we already have what we

already have a right to on all copper and you are offering us this wholesale Broadband Service so we don't need to get UNEs as well. Is that a fair conclusion what of you are saying here?

A. That you don't need to get UNEs? That's our belief because we do not believe it's required to be unbundled and that it's able to be unbundled.

Q. Can you pick up your rebuttal testimony, please?

EXAMINER WOODS: Could we go back to that

just one minute? Did that question go to necessary and impaired?

MR. BOWEN: Maybe.

EXAMINER WOODS: Because I think I want to get that clear, because I am not sure exactly where you are at now from what you just said. Is it because you don't believe that Project Pronto meets the necessary and impair standard or because you don't belief that Project Pronto can be broken down into UNEs?

THE WITNESS: Both, as actually covered in my prefiled testimony.

EXAMINER WOODS: Well, that's what I thought, but I just wasn't sure that that answer to your last question made that distinction clear.

MR. BOWEN:

Q. Okay. Now rebuttal testimony. You will

agree with me that SBC, again I am not asking for a legal conclusion here, but you will agree with me as a lay witness that SBC has an obligation to unbundle its loop network; isn't that fair?

A. Those parts of it for which there have been a necessary and impair analysis and are on the list of UNEs, yes, sir, I agree that's fair.

Q. What list of UNEs are we talking about? The SBC's list of UNEs?

A. Yes, sir.

Q. Do you think this Commission has an ability to include additional -- to add to that list on its own?

A. As a lay person answer, I believe this Commission has been begin the ability by the FCC to do so after a necessary and impair analysis.

Q. Okay. So do you believe that this

Commission has the power to require you to offer Project Pronto as UNEs?

A. I believe it's -- if this Commission performs a necessary and impair analysis -- and this is a lay answer -- but I believe this Commission would certainly have the ability to order us to do that, and if that analysis were performed, and I guess subject to any appeal that SBC might think necessary.

Q. Okay. Now, SBC is not trying to re-monopolize the local loop network by deploying an architecture that it says it can't unbundle, is it?

A. I don't believe it is.

Q. And if it were doing that, that would be wrong, wouldn't it?

A. I believe it could be.

Q. Could you look at your testimony, your rebuttal, at page 2, please, the Q and A that begins at line 4. And you are talking about the goals of Pronto. And one of the goals you identify there is to extend DSL capabilities of your loop plan to residential customers; do you see that?

A. Yes, sir.

Q. Elsewhere you say that what that really means is internet access basically, right, to residential customers?

A. It's our belief that that would be pretty much what they would be interested in.

Q. But the architecture you are deploying will support a lot more than just internet access, won't it?

A. Can you be more specific?

Q. Sure. Have you ever heard of the ATM passive optical network notion?

A. I have heard of it, yes.

Q. What about BRX-based services?

A. I am not familiar with BRX-based services.

Q. Do you know whether or not your company in its Pronto analysis has ever considered using the

Pronto architecture to support APON or BRX-based services?

A. Well, since I don't know what BRX services are, I can't answer that part of the question. But I know that my company is looking at an

ATM passive optical network type of deployment. But none of that has been finalized.

That's actually part of Project Pronto. Project Pronto really has three distinct pieces. One is the Litespan technology and the OCD that we are really talking mostly about today. The second one is the APON type of network that Mr. Bowen referred to. And the third is the ATM switching for voice that, you know, the trunking over ATM possibilities that are being explored and so on. All of that collectively is what SBC regards as Project Pronto. In my testimony I

am referring to just the first of those three.

Q. Okay. But it's not just about ADSL for internet access, is it?

A. The first part of it, as I explained a couple of pages later in my prefiled rebuttal, this first part of Project Pronto which is the deployment of the NGDLC and the fiber and the OCD, that was really believed by SBC to be something that would be responsive to the goals of the Act in terms of advanced services for the general public. So it was trying to get that type of capability, as I said here

on page 2, out to a segment of the public that didn't typically have that capability before.

So to the extent that that's what SBC was trying to accomplish, you know, for the industry as a whole, in other words for all data carriers to be able to participate in that, then, yes, initially -- and

based on what's available, initially it was ADSL internet access for residence customers.

Q. We will get to the details of what ATM can or can't do with reference to later parts of your testimony. I am just trying to understand, I think you agreed that it will do more than just ADSL?

A. Can I clarify that?

Q. Sure.

A. I don't agree that what we are talking about in today's hearing which is the NGDLC remote terminal and the OCD and the central office and the fibers that connect those, those are not an APON network, and those will not support that type of network capability. That's a separate subject under the overall SBC umbrella of Pronto.

Q. All right. Just for the record, what is

APON? What does passive optical network mean?

A. Sorry?

Q. What does passive optical networking mean, the APON mean?

A. It means to me that it's an optical network that doesn't have active devices such as electronic devices that does multiplexing and demultiplexing and stuff like that. It's basically where you have a network of fibers and you are able to branch that out to reach multiple locations using these power splitters. Rather than being frequency splitters like we think of for DSL, APON uses power splitters that then send the same set of frequencies out to multiple locations. And it's the passive optical network or, in other words, the APON device, that's A-P-O-N device, is actually this non-electronic type of power splitter. That's all that that is referring to.

Q. Is it fair to say that Pronto, although the first application is internet access using ADSL, really is your network for the future; isn't that right?

A. Well, I would describe it this way. We regard this part of Pronto that we are here to talk about today as a growth vehicle for POTS and an enabling vehicle for DSL services. And we ultimately believe it will not just be ADSL internet access limited. We believe through our collaborative processes that are described in our testimony that the capabilities will go beyond that.

Q. Okay. I take it, though, that even the current version of Pronto architecture will support both TDM and ATM-based services; is that fair?

A. Separately it supports both, that's fair.

Q. Would you agree that SBC should not be allowed to dictate other carriers' use of its loop plan?

MR. BINNIG: I guess I will object to the relevance of the question.

EXAMINER WOODS: I don't know who "its" is.

MR. BOWEN: I'm sorry?

EXAMINER WOODS: I don't know who "its" is.

MR. BOWEN: